3M Company
Design No. 3MU/BI 120-05
Firestop System
3M™ Fire Barrier™ 615
3M™ Fire Barrier™ 615+
ASTM E814-13a (2017)
CAN/ULC-S115-11
Test Pressure Differential – 2.5 Pa (0.01 in. of water)
Rating1: See Table 1

Penetrant	Pipe Diameter	Wrap Length	Seams	Layers	CAN/ULC-S115		ASTM E814	
					F, FH	FT, FTH	F	T
Steel	4 in.	30 in.	None	1	2 Hr	1 Hr	2 Hr	1 Hr
Steel	4 in.	30 in.	None	2	2 Hr	2 Hr	2 Hr	2 Hr
Cast Iron	4 in.	30 in.	None	1	2 Hr	1 Hr	2 Hr	1 Hr
Cast Iron	4 in.	30 in.	None	2	2 Hr	2 Hr	2 Hr	2 Hr
EMT/RSC	4 in.	30 in.	None	1	2 Hr	1 Hr	2 Hr	1 Hr
EMT/RSC	4 in.	30 in.	None	2	2 Hr	2 Hr	2 Hr	2 Hr
Copper	4 in.	36 in.	None	1	2 Hr	1 Hr	2 Hr	1 Hr
Copper	4 in.	36 in.	None	2	2 Hr	2 Hr	2 Hr	2 Hr
Steel	4 - 8 in.	36 in.	None	1	2 Hr	1 Hr	2 Hr	1 Hr
Steel	4 - 8 in.	36 in.	None	2	2 Hr	2 Hr	2 Hr	2 Hr
Cast Iron	4 - 8 in.	36 in.	None	1	2 Hr	1 Hr	2 Hr	1 Hr
Cast Iron	4 - 8 in.	36 in.	None	2	2 Hr	2 Hr	2 Hr	2 Hr

Table 1. Through Penetration Firestop System Installation Details and Ratings

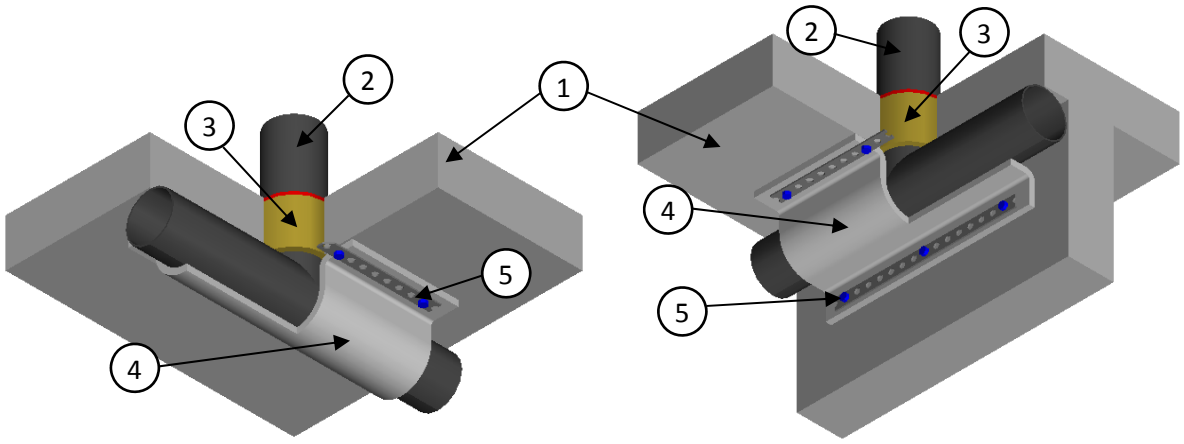


Figure 1. Through Penetration Firestop System

1. **SUPPORTING CONSTRUCTION:** Refer to Figure 1 and Table 1. Create a round opening in a Code conforming 1 or 2 hour fire-rated floor/ceiling or wall assembly. Use min 2-1/2 in. thick low density cast concrete or min 3.6 in thick low density cast concrete for the 1 hour

and 2 hour fire-rated floor-ceiling assemblies respectively. Use min 3.2 in. thick or 4.6 in thick normal weight cast concrete for 1 hour and 2 hour fire-rated floor-ceiling assemblies respectively. Verify compliance of the supporting construction with its corresponding listed design.

2. **PENETRATING ITEM:** Refer to Figure 1 and Table 1. Install the penetrating item with either a T or elbow configuration ensuring that the section of penetrating item on the exposed side of the system is parallel and directly adjacent to the fire-rated floor/ceiling or wall assembly (Item 1).

3. **FIRESTOP SYSTEM:** Install an Intertek Certified 3M Fire Protection Product (firestop system) designed and listed to seal the specified penetrating item (Item 2) with an F rating matching the fire resistance of the supporting construction (Item 1). When a specific packing material is referenced in the listed design, as an alternative, use Intertek Certified, min. 4 pcf, mineral wool installed to the full thickness of the floor or wall and tightly packed (min 50% compression). Use an Intertek Certified, 3M sealant, caulk, putty or spray, listed for use with the specified penetrating item (Item 2), and applied as detailed in the corresponding listed design.

4. **CERTIFIED MANUFACTURER:** 3M Company

   CERTIFIED PRODUCT: Duct Wrap

   CERTIFIED MODEL: Nominal 6 pcf**,** 3M™ Fire Barrier™ Duct Wrap 615 and nominal 6 pcf**,** 3M™ Fire Barrier™ Duct Wrap 615+.

   Install the nominal 1-1/2 in. thick, nominal 6 pcf duct wrap in a "U" shape around the penetrating item (Item 2) and attach to the supporting construction (Item 1) as described below, meeting the application layers and details described in Table 1. Cut edges are to be sealed with aluminum foil tape. Use additional duct wrap material to fill void spaces created between the penetrating item (Item 2), supporting construction (Item 1), and duct wrap. Fill these void spaces to a min. depth of 3 in. from the uninsulated end of the penetrating item (Item 2).

   Single Layer: Wrap to be installed in a "U" shape around the penetrating item (Item 2). Ensure that a min. 3 in. flare is present to accommodate securing of the clamping plate (Item 5) on both sides of the penetrating item (Item 2) to the supporting construction (Item 1).

   Double Layer: Wrap to be installed in a "U" shape around the penetrating item (Item 2). Wrap around the penetrating item (Item 2) such that a min. 3 in. flare is present to accommodate securing of clamping plate (Item 5) to floor-ceiling and/or wall assembly (Item 1).

5. **CLAMPING PLATE:** Install min. 1-1/2 in. by 3/16 in. thick steel plate with pre-drilled nominal 1/4 in. diameter holes. Secure the clamping plate with min. 1/4 in. by 2-3/4 in. long steel masonry anchors or Tapcon Fasteners and 1-1/4 in. washers ensuring the fastener passes through the 3M Fire Barrier Duct Wrap 615, 3M Fire Barrier Duct Wrap 615+ (Item 4) at min. 8 in. on center to clamp the wrap material against the supporting construction (Item 1).